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Abstract

Research and development activities related to the Personal and Social Development Program (PSDP) are reviewed. This program is a major element in one of the two components constituting the prescriptive phase of a comprehensive guidance system currently being developed. Clarification of program objectives and assumptions, development of student materials, and preliminary field testing of these materials have for the most part been completed. Controlled experimentation of the effectiveness of Prescribed Learning Experience materials is planned for the forthcoming school year. The prime criterion in such experimentation will be overt change in student behavior and the focus will be upon the extent to which PSDP materials result in desirable modifications in student behavior. It is anticipated that such a program will result in increased student capacity to plan their educational and total career development and to follow through with successful implementation of the plans thus formulated. (KJ)

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BEHAVIOR ASSESSMENT AND MODIFICATION IN THE PRESCRIPTIVE PHASE OF A COMPREHENSIVE EDUCATIONAL PLANNING SYSTEM

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Guidance Research Program

American Institutes for Research

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### Comprehensive Guidance System: Prescriptive Phase

Through auspices of a grant from the Division of Comprehensive and Vocational Education Research of the United States Office of Education, efforts are underway to design and develop a comprehensive guidance system. While primarily geared to a system of individualized education (cf. Silberman and Carter, 1965; Flanagan, 1967, 1968) particular components of this system and some of the specific materials being developed have potential value in more conventional school settings. In developing the system, an attempt has been made to serve the needs of students at each academic level and to integrate guidance as much as possible with the ongoing instructional process. While the major emphasis in this system is on developmentally-oriented learning activities for all students rather than on the remediation of specific students' difficulties, the necessity for an effective prescriptive or remedial phase of guidance is not, and perhaps for the foreseeable future will not, be obviated.

As currently designed (Jones and Nelson, 1969), two components constitute the prescriptive phase of the comprehensive guidance system. Within these components, instructional activities are not intended for all students, but rather for those encountering specific problems which serve as barriers to their development, both inside and outside the classroom. The first of these components, Within-School Prescribed Learning Experiences, attempts to assist each student to resolve academic (i.e., learning) and interpersonal problems and specific questions which are impeding his current progress and development. The second component, Orientation-Out Prescribed Learning Experiences, seeks to help each student to acquire the various kinds of information, understandings,

overt behaviors, and attitudes he needs in order to function effectively when he exits from an educational system or a specific school setting. Project personnel are currently attempting, not to exhaust the range of techniques and procedures through which these two components may be implemented, but rather to facilitate experimental comparison of a few promising alternative approaches. This presentation will focus on current investigations of the first of these components.

### Personal and Social Development Program

The Personal and Social Development Program (PSDP) which combines student behavior assessment procedures with behavior modification techniques is a major element of this component. With its substantial use of computer technology, this program is designed to assist students at all academic levels to assess the present status of some of their academic (i.e., learning) and interpersonal behaviors, and to both select and implement plans for the acquisition, performance, or maintenance of more effective behaviors or for the reduction of behaviors which are impeding student academic or social development.

### Underlying Assumptions of the PSDP

Several underlying assumptions of such a program merit specific enumeration:

1. The PSDP assumes that modification of overt student responses is more relevant to achievement of more effective behavior than is attitude change, self concept improvement, or student acquisition of the knowledge, concepts and principles of human development. Support for this assumption is provided by reviews such as those of Festinger (1964) and Cohen (1964).

2. From the previous assumption follows a related assumption that the assessment strategies selected to provide information for the modification of student behavior and to evaluate the effectiveness of the PSDP must concentrate on the recording of overt behaviors. It is further assumed that the method of direct observations of student behavior in naturalistic or realistically contrived situations is the most valid assessment procedure for such a program (cf. Flanagan, 1962; Vernon, 1964).
3. Students in an individualized educational context are encouraged to take personal responsibility for their behavior. Since the PSDP has been developed for such a setting, it is assumed that students should play a major role in both assessing and modifying their behavior. Such an approach stands in stark contrast to most behavioral modification programs used in educational settings (cf. Gropper, 1967; Spivak and Swift, 1967; O'Leary and Becker, 1967).
4. The PSDP assumes that students should not expend effort searching for "underlying causes" of their behavior. Thus, psychodynamic theories which claim that human behavior problems are but symptoms, or surface manifestations of more serious abnormalities deep within the individual are not accepted. PSDP emphases do however relate compatibly to social learning theory and research (cf. Mischel, 1968).
5. Again with regard to the behavior modification portion of PSDP, it is assumed that to be optimally effective an instructional approach to behavior modification must contain objectives requiring that students manifest more than knowledge and understanding of a series

of facts, concepts or principles. Students should be encouraged to practice their desired responses which follow individualized plans and schedules for response performance.

### Assessment Strategies

At academic levels below grade nine the vehicle being investigated for carrying out the assessment portion of the PSDP is the Performance Record in which observers use a comprehensive list of behaviors found to be either effective or ineffective in promoting academic and social development. Student behavior is assessed by the recording of critical incidents. In this way, the assessment strategy is applied in natural situations and behaviors performed without prompting or cueing are obtained. A key consideration in the use of this assessment strategy is that the observer must be able to discriminate between behaviors that are and are not critical for the development of each student. The consequences of a student's critical incident clearly must be either effective in assisting him to develop so that he achieves the objectives of the program or ineffective and therefore interfering with this development. What is critical for one student might not be critical for another student. Teachers are usually the main source of such personalized information on students and, therefore, are probably the persons most capable of using the Performance Record.

The Social Situations Test is used for the same purpose as is the Performance Record but is currently being explored only at the secondary school level. Its distinctive design and implementation necessitate the use of realistically contrived situations in which the students know they are being observed. Students are asked to discuss problems in pairs or to participate in small group situations, and the behaviors they exhibit under

these circumstances are taken as indicators of the nature and extent of some of their various social skills in these situations.

#### Behavior Modification Strategies

Self-instructional booklets are being studied as initial media for the implementation of the behavior modification portion of the PSDP. We hope that this prescriptive aspect of the program will ultimately include other media as well. For example, individual or group counseling activities conducted by trained personnel might be among other Prescribed Learning Experience (PLE) recommendations available to students.

The PLE's used in the PSDP attempt to help students identify which specific observable behaviors they might desire to acquire, maintain, perform more often, or improve (i.e., reduce or replace). Students are aided to identify the stimulus conditions which might elicit and maintain these behaviors in their own lives. After reviewing what they feel might be the consequences of their current performance and of possible changes in it, they decide if they wish to make modifications in their actions. Students desiring behavior change assistance are given an opportunity to investigate and formulate alternative plans of action following which they implement these plans on the basis of individualized schedules. Adult problem-solving assistance at key checkpoints is provided throughout this process especially in the culminating step which involves joint decision making to evaluate the degree and nature of behavior change which has taken place. Student leadership and personal choice opportunities occur throughout the entire process.

Approaches similar to those above are used in PLE's having a number of different emphases. In addition to PLE's dealing with "Behaviors to be Improved" in which students learn how to "reduce or replace ineffective academic and personal behaviors, another type of PLE is directed toward "Behaviors to be Encouraged." These PLE's attempt to positively reinforce

students who have already performed specific academic and social behaviors which usually produce desirable results. Students then receive the opportunity of using instructional assistance to help them maintain these behaviors or perform them more often in the same or in similar situations. Yet another area of emphasis in PLE's now being field tested is enabling students to acquire and subsequently perform behaviors which they have not here-to-fore been able to perform.

The assumption basic to this variety of treatment approaches is that in order to be effective, assessment and modification assistance must be individualized to each student's needs. Assessment data then must exert a strong influence on the behavior change techniques selected by students working on problematic behaviors. For example, the PLE booklets contain a number of different plans for modifying behavior from which the student may adapt the one most appropriate based on what he learned through assessing his behavior. The goal toward which such efforts strive is the design of the best possible individualized treatment for each problem. If this attempt to avoid bifurcation of assessment of treatment is successful, we will not find statements by reviewers of mental health programs such as: "In the past, attention to identification has been so great that little energy has been left for interventions (Morse, Finger and Gilmore, 1968, p. 468)."

#### Field Testing and Implementing in PSDP

The PSDP has undergone preliminary field tests during the school year just concluded. Numerous modifications have resulted. With regard to the Social Situations Test for example, it was found that the orientation materials were inadequate both in clarity of style and in providing the specific information needed by each student in order to participate successfully. Additionally, some of the situations used in the test were discovered to be

of insufficient interest to the age group being tested. Other changes have been recommended by students to improve the behavior modification booklets, including elimination or revision of some objectives, improvements in the quality of examples and appropriate changes in vocabulary.

Field tests of the Performance Record at two elementary schools have similarly led to changes. Though by and large the students reported that the behavior modification booklets were understandable, there was considerable difficulty encountered in grasping some rather sophisticated concepts of situational analysis in the program (e.g. analyzing the situation in which a behavior occurs to see if there are any consistencies in what happens just before or just after the behavior in question). For many students, the booklets seemed too long and the elimination of some of the contents and the recommendation of only selected portions of specific booklets for individual students is under consideration. More frequent transitions between activities and topics covered in the text are also needed. Among other interesting findings it should be noted that while only one third of the students in the field test completely finished a booklet, two thirds reported that they felt the material helped them to understand themselves better, to understand others better, and that they would work on another booklet if the opportunity were provided. Further, 75% of the students felt that their behavior had been improved through working with the PLE materials.

These field test experiences have been useful in preparing for a full scale experimental implementation of PSDP this fall within a system of individualized education. Project PLAN (Prescribed Learning in Accordance with Needs), a computer supported system of individualized education currently under development by the Westinghouse Learning Corporation and American Institutes for Research in cooperation with selected school districts throughout the nation, presents a very compatible and flexible climate suited to

the implementation of the PSDP. In such a system PLE recommendations can be integrated smoothly into a student's program of studies if he, his teacher, and his parents agree as to the applicability of these PLE's for him.

### The Computer and PSDP

The computer will play a major role in the forthcoming implementation of PSDP. In Project PLAN, students do not have direct on-line access to the computer. Rather, the computer is used for information storage and manipulation, and for systems monitoring. Another computer function is to recommend appropriate learning experiences for inclusion in a student's Program of Studies. This fall the computer-recommended Program of Studies for all students involved in the experimental implementation of PSDP will include orientation materials preparing students for participation in the program.

Each of the nearly 350 behaviors encompassed by the Performance Record and Social Situations Test are being coded and placed within the memory capacity of the computer. When dealing with the Performance Record the computer will be prepared to keep a record of all behavior assessment data sent to it by the teacher or other observer. Additionally, if a student performs a behavior more than once, this must also be recorded. Whenever one student performs a specified number of behaviors of a particular type (e.g., Behaviors to be Encouraged), a message will be sent to the teacher indicating that the student has performed the recorded behaviors and that he and his teacher should discuss adding the appropriate behavior modification booklet to the student's Program of Studies. The booklets will be available in the classroom or counseling offices if the recommendation is accepted. For research purposes it is necessary for the computer to retain information on all recorded behaviors performed by students during the school year and to keep a record of all materials which are recommended to any given student as well as the ones which are selected.

Implementation of the Social Situations Test demands that the computer focus on only 40 students at any one time (i.e., the suggested number of students for any single administration of the test). Besides the specific behaviors assessed by the HSSST the computer must have in memory the 40 categories into which these behaviors have been placed. Following an administration of the test, the computer receives a record of all the behaviors observed, sorts these behaviors by student number, and subsequently sends each student a printout indicating specifically what behaviors he performed during the test. At this juncture, the student is assisted in examining alternative ways in which he might utilize these results and in carrying out the plans he formulates for behavior change. Thus the computer is viewed in the PSDP as a major aid in storing, processing, and retrieving information in order that the program might more effectively serve both students and staff.

#### Design for Validating PSDP

Current plans call for an experimental test of the Performance Record during this coming fall semester. The cooperation of seven Project PLAN teachers at the fifth and sixth academic levels has been obtained for the proposed Performance Record investigation. Within these classes, each of which contain approximately 30 students, it is tentatively planned that three treatment conditions will be instituted. Based on a random assignment of students, approximately one third of the students within each class will receive no orientation to the PSDP, nor will they receive any assistance in assessing or modifying their behavior. Critical incidents on these students will however be recorded as they will be on students in all treatment conditions. Another one third of the students within each participating classroom will receive, when the requisite behaviors have been observed, booklets purporting to be useful for their understanding and changing their behavior.

The remaining third of the students will be exposed to orientation, behavior assessment and appropriate behavior modification materials from the Performance Record phase of the PSDP. The criterion measures of prime interest will be the actual observed behaviors of the students over time. It is hypothesized that students exposed to the PSDP program will maintain and increase desirable learning and interpersonal behaviors and will significantly decrease those behaviors which have proven ineffective in helping students move toward attainment of their educational and social goals. Only random non-significant fluctuations in performance are expected among students exposed to the competing treatment or among those receiving no assistance whatever. Development of a similar design and procedures for an experimental investigation of the Social Situations Test during the spring semester of the 1969-70 school year are also underway.

#### Usefulness of PSDP

The PSDP is being researched not only as a method for helping students to achieve an understanding of the present status of some of their academic and interpersonal skills and behaviors but also as a process for aiding them to formulate and pursue immediate and long-range goals related to these behaviors. The behavior modification portion of the program is a means for assisting those students who would like to change their performance in specifiable ways. Students are given opportunities to understand and supplement the information collected through the behavior assessment strategies, to decide whether or not they wish to take advantage of the behavior modification assistance offered, and then to formulate behavior change goals and plans for achieving these goals.

Hopefully the PSDP will prove useful in eliminating some existing barriers to successful educational planning by students. The behaviors stressed by the Performance Record and Social Situations Test are postulated to be

influential in facilitating or hindering student success in academic and social situations. On a long-range basis such behaviors help to determine whether or not students will successfully implement their educational plans and reach the goals to which they aspire. The process which is used by the PSDP in helping the student change his behavior may well increase his ability to formulate plans at least on a short-range or intermediate-range basis, and to follow through on plans thus formulated. Through these ways students hopefully will be assisted to increase the quality and the benefits received from their career planning activities.

#### Summary

Research and development activities related to the Personal and Social Development Program have been reviewed. This program is a major element in one of the two components constituting the prescriptive phase of a comprehensive guidance system currently being developed. Clarification of program objectives and assumptions, development of student materials, and preliminary field testing of these materials have for the most part been completed. Controlled experimentation of the effectiveness of Prescribed Learning Experience materials is planned for the forthcoming school year. The prime criterion in such experimentation will be overt change of student behavior and the focus will be upon the extent to which PSDP materials result in desirable modifications in student behavior. It is anticipated that such a program will result in increased student capacity to plan their educational and total career development and to follow through with successful implementation of the plans thus formulated.

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